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Landscapes of the dead. The evolution of human mortuary activity from body to place in Palaeolithic Europe.

Paul Pettitt

“Burial provides an extreme case of a detaching ritual....the evidence for Neanderthal burial had the sense of *adieu* rather than an *au revoir*. The latter might be expected with a true detaching ritual since it implies meeting again in some other context” (Gamble 1999, 404).

Introduction: how the dead once lived

Human interactions with the dead constitute some of the most profound human characteristics that can be identified in the archaeological record. From later prehistory onwards at least, some of the most ambitious and archaeologically recognisable constructions served to contain the dead and project their continuing agency among the living. The dead are the subjects of the endeavours of all archaeologists, and if it were not for their refusal to retreat entirely from the societies from which they have departed would deny us of the lumps and bumps in the landscape that are often so rewarding to excavate. Monuments and tombs, however, form merely a readily identifiable aspect of a vast range of mortuary activity; in terms of the existing archaeological record they appeared very late; they were not afforded to everyone, and in many places even today the physical remains of the dead simply disappear, exposed to the vultures, consumed in the fire, and floated down the rivers, lost to future archaeology. From an evolutionary point of view what we do with the dead is to a great extent surface detail; the real evolutionary value lies in the assumptions that underlie any belief that our minds may persist and effect social agency beyond physical death.

It is surely a certainty that such assumptions arose during the course of the Palaeolithic; the appearance of elaborate burials and ‘art’ during the European Upper Palaeolithic may be confidently interpreted as reflecting *some kind* of underlying assumptions relating to symbolic systems and cosmological beliefs, even if the specific meaning of these phenomena will never be known to us. But how far can one push back the recognition that hominins believed in the persistence and agency of the dead? Palaeoanthropologists have concerned themselves with understanding the cognitive abilities and behaviour of humans from distant times in evolutionary context, and out of a

burgeoning literature amassed over the last two decades ‘symbolism’¹ has emerged as the main – perhaps the only – characteristic that separates modern, highly encephalised hominins (*Homo sapiens* and possibly *Homo neanderthalensis*) from others (e.g. Mellars 1991, 1995; McBrearty and Brooks 2000; Wadley 2001; Henshilwood and Marean 2003; d’Errico 2003; d’Errico *et al.* 2003). Such debate has, however, concentrated on more obvious indicators of symbolism, namely pigments and art. But what are the dead if they are not symbols? Symbols of lives once lived, of past attachments and the ultimate detachment, their accumulated social baggage and agency maintained through material acts, group memory and commemoration?

Echoes of the dead of the Palaeolithic still linger on the river banks, lake edges and caves which were frequented by the subjects of our study, and haunt the pages of academic publications which, ostensibly, focus on the living; that is to say, how the dead once lived. There are, in fact, many places in the world where the dead still linger, and it is not just archaeologists and historians who are concerned with them. Many people, from most societies past and present, believe in the continued existence and agency of the dead; from the tangible fears, collective memories and superstitions of the past to the entertainments of Victorian Europe and the present day, the dead form powerful symbols in the lives of even the most sceptical of people. They are ubiquitous. Given this, it is surprising that few archaeologists have considered the nature and ramifications of hominin interactions with the dead in long-term evolutionary context. ‘Burial’ tends to get trotted out in increasingly outmoded ‘checklists’ of equally outmoded concepts of ‘modern human behaviour’ which fail to comprehend the nuanced cognitive and behavioural evolution of the genus *Homo* or, indeed, what the genuine cognitive ramifications of sticking a body in a shallow pit are. Perhaps this neglect is not surprising, as mortuary activity is not seen as one of the ‘headline changes’ of hominin evolution (Gamble 2010, 17), but studying it is, I contend, a potentially powerful route into the elucidation of cognitive and symbolic evolution that is independent of the current emphasis on pigments, personal ornamentation and figurative and non-figurative art, and thus may provide a different trajectory to and add nuance to our understanding of the emergence of the symbolic hominin. Hodder (1990) argued that by the late Palaeolithic concerns with death were associated with the *Domus* and reflected (in the Near East at least) with burial under house floors, part of a wider process of ‘domestication’ of our own species. The elaborate burials and circulation of human remains in Mid Upper Palaeolithic Europe, particularly when viewed against the rich floruit of art in the period (Gamble 1982) may be confidently interpreted as deriving from supernatural underpinnings, but what about beforehand? Gamble (1999) is one of the very few Palaeolithic

¹ I take the definition of ‘symbol’ to mean a sign or memory device that signifies a concept, or, to put it more simply, something that stands for (and communicates the concept of) something else.

archaeologists who have recognised the social and evolutionary importance of mortuary activities in the Palaeolithic record, forwarding the notion of detachments (as a counterpart of social attachments) as an inherently social activity.

The issues of individual agency and the agency (and particularly symbolism) of material culture has been well-debated in Palaeolithic archaeology (e.g. papers in Gamble and Porr 2005 and Henshilwood and d'Errico 2011 and others cited above). I am not concerned with these here. Instead, I wish to examine the evolution of hominin interactions with the dead, from the specific concern as to when *places* and *landscapes* became associated with the dead and thus imbued with the symbolism of the dead. When did these locales cue certain behaviours, in this case associated with death and memory (*sensu* Coward and Gamble 2009)? In order to address this question I shall restrict myself to pre-*Homo sapiens* hominins (as it may be safely argued that some aspects at least of the Initial and Early Upper Palaeolithic record – whoever made it – can be interpreted as representing cosmological beliefs in which spirits and the dead were integral parts: e.g. Tattersall 1998) and to the European record (as it forms the best archaeological record for such pre-modern humans, at least in terms of mortuary activity). I shall argue that a persistent association of the dead with specific locales can be observed for the Neanderthals.

Cognition, symbols and the evolution of superstitious belief

One of the most remarkable examples of the imagination of *Homo sapiens* is the way in which we interact with entities other than fellow humans (Coward and Gamble 2009). Such interactions are facilitated through our ability to anthropomorphise the thoughts of animals and to believe that once-living humans persist in some form and continue to possess a degree of cultural agency *post mortem*. By so doing, such “moderately counter-intuitive” creations of our minds are given understandable form, meaning and power in the world (Atran and Norenzayan 2004). Our imaginations, however, have lead to some surprisingly complex and persistent belief systems which appear, at first sight, to be maladapted to the evolutionary world. As Bloch (2009, 187) has asked; “how could a sensible animal like modern *Homo sapiens*, equipped by natural selection with efficient core knowledge, i.e. knowledge well-suited for dealing with the world as it is, hold such ridiculous ideas as: there are ghosts that go through walls; there exist omniscients; and there are deceased people active after death?” There is no space here to consider in detail the numerous ways in which belief in the supernatural may increase evolutionary fitness (see, for example, Atran and Norenzayan

2004; Boyer 2008; Rossano 2010) but some general consideration should provide justification for why hominoid and hominin groups should be under selection for such beliefs. Emotionally powerful existential anxieties are a major motivation for religious belief, and there can be no greater an example of these than death; supernatural agents may therefore be invoked to ease death anxiety (Atran 2002. Atran and Norenzayan 2004). Although death is therefore a primary focus of religious speculation and ritual action (Dickson 1990, 93), Insoll (2004, 67) has, however, cautioned that it would be incorrect to view it as the main reason for or sum total of religion, despite the fact that archaeologists have had a “sometimes obsessional focus upon the archaeology of death” (ibid., 33).

The moderately counter-intuitive creations of our minds explain why in most human societies there is no hard and fast intellectual distinction between the natural and supernatural (Bloch 2009). Individual agency might originate within humans, animals, non-organic items or those of a non-biological nature, and in the case of the former persist beyond biological death. For most humans death is not conceived of as an abrupt end of the individual but a transformation from one state to another, one which usually results in an increase in the power of their agency as they ‘transcend’ the biological world (Huntington and Metcalf 1979; Ingold 2000, 93). Such beliefs are common to all known religions past and present; “every religion assumes entities such as ghosts, angels, ancestor spirits, and so on. These often have mental lives (desires, beliefs, goals), but no physical form. In addition, most, if not all, religions posit an afterlife, and the purposeful creation of the universe, including humans and other animals. You are not going to find a place, anywhere, where such notions are alien” (Bloom 2007, 148). Transformational links of the body with the wider landscape is common to ways of thinking often simplified as ‘animism’ and ‘totemism’ (Insoll 2011b). In this sense death, like the remote and mysterious surfaces of decorated caves, links the biological and supernatural worlds in complex and varied ways. Under ideal circumstances, then, archaeologically recognisable mortuary ritual should form an heuristic link between the observable world of the natural and the underlying supernatural rationale that underpins it, in the same way as we assume that figurative and non-figurative marks on a cave wall are in some way an heuristic for the cosmological beliefs that presumably inspired it.

Echoes of the supernatural are ubiquitous in the present and the ethnohistorical past, and there is no reason to suppose that the supernatural has not been part of the cosmological belief systems of *Homo sapiens* since at least the earlier Upper Palaeolithic (see Germonpré and Hämmäläinen 2007 for a specific example). Cognitive scientists researching the origins of religion appear to agree that at a relatively early evolutionary stage hominins came to be cognitively predisposed towards the belief that minds could survive beyond physical death (see references in Pettitt 2011c), and were thus

hypersensitive towards reading meaning in natural patterning; the combination of the two make it natural, for hominins, “to believe in gods and spirits, in an afterlife, and in the divine creation of the universe” (Bloom 2007, 150). The question they are silent upon is exactly when hominins reached the cognitive stage at which such a dualism arose.

A recognisable point of origin for the origins and elaboration of supernatural beliefs would presumably have been pre-existing social rituals. Incorporating supernatural elements into social rituals would intensify their meaning and agency, making them “more effective, more dramatic, and just more fun” (Rossano 2010, 118). This may offer a general explanation for their growth, although for a more specific explanation of the elaboration of counter-intuitive imaginary notion one can turn to children. Gamble (2007, 228-30) has stressed the need to investigate the growing environment of children – which he calls the *childscape* - and one should not underemphasise the contribution of the child’s mind to the emergence of supernatural belief. Bloom (2007, 149) noted that children universally accept the notion of the persistence of an individual’s social agency after death, an observation that suggests that the notion that the mind is separable from the body is natural, whereas specific religious explanations for what happens to the mind/soul are learned later. To Rossano (*ibid.*, 117) increasing social complexity will select for more imaginative children as they grow into more socially skilled adults; thus it is likely that their childhood imaginations would become exapted for use in the wider ritual sphere, such as in healing rituals or in the notion that the soul of the dead may persist, can be sensed, and can have social agency. Bloch (2009) has provided an explicit example of the adaptive strength of the imaginative capacity in the origins of cognitively modern *Homo sapiens*, emphasising the interconnectedness between the ‘transcendental social’ – social structures comprised of established roles and groups wherein essentialised groups exist and can live in the imagination– and religion which, in this context may be taken to include concepts of the supernatural. Thus a first step towards such societies of the mind would be the acknowledgement of the supernatural, and it is reasonable to assume that supernatural beliefs would further evolve in tandem with the evolution of a symbolic capacity.

In some respects it is easy to understand how the most obvious phenomena may have given rise to specific elements of supernatural belief. The night, for example, is a place of disorientation and danger; thus it is no surprise that for many small-scale societies it is associated with supernatural beings and transformation (Galinier et al. 2010). Odd places – those where deaths have occurred, other dangers have been experienced or to which deceased individuals had close ties - are often associated with ancestors, although such associations are understandably complex and no broad generalisations can be made from ethnography (Insoll 2011a). Such simple associations presumably

have very deep evolutionary roots, and thus form the basic materials which may be elaborated as hominin cognition and social organisation developed, a major watershed in which would be when the hominin brain became the human mind (Gamble 2010). Thus one may start from the proposition – firmly established in evolutionary anthropology and the cognitive study of religion – that the hominin mind is *predisposed* to imaginary belief and thus religious expression (e.g. Barrett 2011, Bloom 2007, Boyer 2008. Atran 2002. Atran and Norenzayan 2004, Rossano 2010).

Palaeoanthropology, I suggest, can make a significant contribution to this field; only hominin fossils and Palaeolithic archaeology will reveal whether religion ‘emerged’ only with *Homo sapiens* either as part of the process of becoming cognitively modern (the ‘concurrence hypothesis’); as behavioural changes after this evolution (the ‘adaptation hypothesis’), or whether religion had been acquired through natural selection before the evolution of *Homo sapiens* (the ‘Pre-human religious hypothesis’) (see Barrett 2010 for a useful discussion and critique of these hypotheses). I contend that Palaeolithic archaeology has an important role to play in the evaluation of these hypotheses – and is perhaps the only means by which they may be tested – and I suggest below that a reading of the specific record of mortuary activity lends support to the Pre-Human religion hypothesis.

Taskscapes, bodies, and the evolution of hominin mortuary activity

As it is the body that experiences the world, and the body that ultimately dies, it is no surprise that the origins of hominin mortuary activity must be sought among inter-individual activities which required no particular locational backdrop; these could occur *ad hoc*, face to face as it were, irrespective of where hominoid and hominin groups were located. Bodies are biologically given and culturally created, and through them we interact as material projects within the world (Gamble 2007), as complex arrays of interrelated activities which Ingold (1993) referred to as *taskscape*s. Our own cognisance of our bodily lifecycles provides us with the notion of mortality, and provides a timescale for our inevitable movement towards death (Gosden 1994, 80), and visual and audible rhythms encountered constantly constitute the taskscape through which our bodies move (Gamble and Roebroeks 1999b, 9). Death pervades the taskscape. To hunter-gatherers the death of resources critical for survival surely shape the very essence of their lives, and thus responses to the dead must occupy a central role in the constitution of their taskscape. Intellectual curiosity in and interaction with dead bodies (which I have termed *morbidity* – see below) and the evolution of mortuary activity must, therefore, be seen as integral to the wider taskscape. In life, bodies, like places, can be ‘accessorised’ with symbolic material culture and by so doing be given increasingly nuanced

meanings (e.g. Pettitt 2011b) and such personal ornamentation may itself be used to represent beliefs about supernatural agency (White 1997).

Although the body may bridge the gap between biology and culture, breaking down a strict division between the two (Gamble 2007), it is possible that belief in the agency of the dead arose from the interaction of two distinct cognitive systems; one which deals with physical bodies and actions (the 'Animacy System') and another which deals with mental states (the 'Theory of Mind' or ToM) (e.g. Barrett 2011). With such interaction a dead body causes a conceptual dualism in which our understanding of the world is predicated on the notion that the body and mind are separate things. The quandary which arises with the dead comprises the contradiction that the animacy system tells the reader that a corpse is dead, but the ToM refuses to stop making inferences about the deceased needs and beliefs and thus its agency (Bloom 2007. Barrett 2011). This dualism, therefore, which has arisen at some point during hominin evolution, "opens the possibility that people can survive the death of their bodies" (Bloom 2007, 149). Thus to Barrett (ibid., 215) Bloom's and Boyer's accounts help explain why the notion of the persistence of human spirits after death "may well be the most widespread and oldest religious concept". If there is any goal which Palaeolithic archaeologists should aim for in the elucidation of the emergence of religion it must, therefore, surely be this.

Archaeologists, however, have been understandably reticent to infer the development of superstitious or religious belief from Palaeolithic archaeology. In order to understand the emergence of such beliefs, however, we do not need to understand their specifics. Identifying the 'function' of 'cave art', for example, is a good example of a hopeless task which tells us more about ourselves than it does 'cave artists' (Bahn and Vertut 1997), and naive and intellectually lazy 'umbrella' interpretations of 'cave art' – particularly the recent 'shamanism' fad (e.g. Clottes and Lewis-Williams 1998) – are highly simplistic (Insoll 2011a) and do us no favours, probably accounting in large part for observable scepticism about the possibility of interpretation in this field. We should not allow these to hold us back from identifying general patterns in the archaeological record that can, if nothing else, be read to imply the existence of superstitious belief and its origins. Potentially useful examples exist from the Middle Pleistocene but are difficult to interpret; what are the implications of *pierres figures* such as the example from Berekhat Ram and Tan-Tan (Goren-Inbar and Peltz 1995; d'Errico and Nowell 2000; Bednarik 2003) or the 'anvils', engraved bones and associated activities at Bilzingsleben (Mania and Mania 2005) which as Gamble (1999, 171-2) has suggested may represent foci for social attachment? At the very least they represent an association of things with bodies in the former and social groups with places in the latter, and in either case may imply cognitive abilities more advanced than a straightforward theory of mind, but they remain

speculative. With mortuary activity we are, perhaps, on surer ground, and it is my contention that a demonstrable and repeated association of the dead with a specific place should at least indicate what I have called an *associative interaction* (Pettitt 2011a) of the dead with a point in the landscape, whereby specific meaning was attached to this association. If associative interaction with the dead and the landscape can be identified in the Palaeolithic record, it may have more heuristic potential than arguing over the possible meaning of *pierres figures*. Whether of course associative interactions necessarily imply an underpinning of belief in the supernatural is open to question, although it does at least provide a point in time on an evolutionary scheme from body-centred mortuary activities through non-symbolic association of the dead with specific places, to fully symbolic associations. I would argue then, that associative interactions between the dead and the landscape provide an important step towards fully symbolically-mediated belief systems, and thus mark if not a 'headline change' in hominin evolution at least a development worthy of several column inches.

An appropriate place to begin a discussion of the origin of mortuary activity is with observed responses to the dead among chimpanzee societies. These may be used as a general heuristic for what one might expect, to a general extent, to have pertained among Miocene hominoids and Pliocene hominins, and which have been summarised elsewhere (Pettitt 2011a; Anderson et al. 2010). Among chimpanzees one can observe occasional cases of infanticide and cannibalism (e.g. Goodall 1977; Norikoshi 1982; Takahata 1985; Hamai et al. 1992), the curation of dead infants by their mothers for up to 68 days after death (Biro et al. 2010; Matsuzawa 2003), the intellectual and physical investigation of corpses (*morbidity*) and various examples of social theatre in close proximity to corpses which appears to be occasioned by them (e.g. Bygott 1972; Teleki 1973; Goodall 1977; Boesch and Boesch-Achermann 2000; Anderson et al. 2010; Cronin et al. 2011). Elsewhere, I have suggested that these may reflect mortuary activities representative of the 'core' (i.e. earliest) mortuary phase which may, variably, have been expressed early in hominoid /hominid evolution (Pettitt 2011a). Activities specifically focussed on the corpse include smelling and investigation of wounds, apparent 'inspections' of the body (as they are described), grooming, pulling at of the arms, stroking and holding of hands, attempts to open mouths, staring into the face, and dragging over short distances (Pettitt 2011a). In addition to these a variety of activities that seem to reflect social theatre occasioned by the presence of the corpse have also been observed, including male displays, 'play' faces, calls that were rarely heard in other circumstances, silences, dominant individuals 'guarding' corpses (as described) and chasing lower ranked individuals away, and so on. This is perhaps not surprising, as social groups will renegotiate their relative standing in a social group when an individual has been removed from it.

As primatologists have until recently been understandably interested in only the live chimpanzee, the number of observed instances of activities around corpses are few, and prior to the 1990s generally anecdotal. Conclusions must inevitably be provisional, therefore, but are nevertheless suggestive of the mechanism by which relatively casual morbidity and social display of the like discussed above might be, under the right circumstances, elaborated into a more recognisable mortuary behaviour (by which I mean behaviours arising from and referring to a corpse). But under what conditions might such elaboration occur? Figure 1 uses data from the five most detailed published observations of activity around the freshly-dead bodies of infant chimpanzees – no data being available for deceased adults – plotting the number of individuals apparently affected by (i.e. behaving in response to) the presence of the corpse, against the total amount of time that such corpse-focussed and corpse-affected activities were observed before the groups moved on, abandoning the corpse for good. It can be seen that the more individuals ‘involved’ in the activities prompted by the corpse the more time was spent by the group doing so. Assuming that this pattern holds with future observations this may suggest that the larger and more complex hominin groups became, the more likely such morbidity and corpse-prompted social activity was to evolve in complexity. Thus one might predict that mortuary activity would be one of the package of social activities that were under selection to evolve as group size and neocortical size increased (Aiello and Dunbar 1993). Figure 1 also shows that the three examples which involve the most individuals and time resulted from deaths through sudden physical trauma (Bambou and Rix fell from trees, Tina was ambushed by a leopard); by contrast the two examples with low duration and few participants resulted from the deaths of infants who had been sickly for some time and whose deaths, therefore, may have been perhaps ‘expected’. This may suggest that the elaboration of behaviours that ultimately become socially determined mortuary rituals may be promoted by sudden and unexpected deaths, and if these occurred in large and socially complex groups the resulting activities would themselves be relatively complex and under selection to be elaborated further. As mobile hunter-gatherers, however, there must surely be a limit on how much time can be spent on morbidity and social theatre to the exclusion of the critical tasks of survival; groups could not continue to spend increasingly longer periods of time in such activities. At some point a critical watershed must have been reached, at which point, I suggest, the natural development would be to leave the dead behind, symbolically, at recognised places in the landscape. Thus through memory and association the face-to-face becomes materialised as place.

From face-to-face to place in Neanderthal mortuary activity

Dunbar (2003) views the origin of religion in social rather than individual perspective. He has interpreted brain evolution in terms of intentional states – reflexive sequences of belief states – which range from one (I believe that...) to the normal human limit of four, suggesting that levels of cognitive intentionality have increased over the course of hominin evolution equating to increasing brain size, group size and grooming time. To Dunbar, a theory of mind, which in modern humans emerges at 4-5 years, requires level 2 intentionality (I believe that you believe...); coercing individuals to conform to social norms requires three levels of intention (I *want* you to *believe* that you must behave how we *want*), but religion, at least as we know it, requires level four intention (I have to *believe* that *you suppose* that there are supernatural beings *who understand* that *you and I desire* that things happen in a certain way). I have argued elsewhere that the intentional and repeated association of the dead with certain locales requires a mind capable of operating at Dunbar's level 3 intentionality, in this case 1) *I know*, 2) *that we all agree*, 3) *that you must be associated with this place* (Pettitt 2011a, b), and conceivably this could require level 4 intentionality if the association is predicated upon supernatural belief that is recognised at a wider group scale.

The repeated burial of multiple individuals at the same site, at least when these can be shown to respect the position of previous interments and especially if they are marked out by rocks or cairns, should be an unproblematic indicator of associative interaction between the dead and the landscape. By the early Mid Upper Palaeolithic ~29 ka uncal BP certain locales were clearly being used repeatedly to dispose of the dead in artificially created graves, which in combination with attaching rituals among the living functioned to create social space (Gamble 1999, 405-12). As I shall argue below, the repeated use of certain rockshelters for Neanderthal burial can be interpreted to reflect this association by at least ~75 ka BP. It is possible that such associations are also indicated much earlier by the deliberate placing of corpses in the landscape at the Sima de los Huesos thus before ~400 ka BP (Pettitt 2011a). At the Sima, however, the dead are associated with a natural, i.e. culturally unmodified place², an act which I have referred to as *funerary caching*. In the context of the importance of such associations it is irrelevant whether caches simply exploit natural features such as the Sima, modify these in a modest way (e.g. with the *Homo sapiens* burials Skhūl VIII and Qafzeh VIII in Israel), or artificially construct them (in the case of formal burials). Thus it is possible that the association of the dead with specific locales has a long evolutionary history.

² It is possible that the one cultural artefact in the Sima, a biface, was deliberately deposited there and thus represents a degree of cultural modification of this place, although one cannot rule out a totally fortuitous reason for its presence in the shaft.

We should not be surprised that such associations formed part of the taskscapes of archaic hominins. Meaningful patterning in the quotidian organisation of hominins in the landscape is a well-known characteristic of the Palaeolithic record. Hominin aggregation at recognised locales probably has a very long ancestry in hominin evolution, and provided the context for sharing, social negotiation and the division of resources critical for survival (Gamble 1999, 2007. Roebroeks 2001). Archaeologists, however, understandably think of the conceptual use of the landscape in terms of hominin survivability, i.e. as paths and nodes of resource procurement and shelter opportunities aimed at sustaining life. It is easy to see, however, that the obvious conceptual connotations of these points in space could also apply to the dead. If Neanderthals were capable of conceptualising the landscape in terms of clustered resource sets and the paths which link them (Gamble and Roebroeks 1999b, 9), then it is possible that they could conceive of the dead in a similar manner. We can deploy our understanding of how Neanderthals organised themselves in the landscape for the purposes of survival as an heuristic for how they may have associated the dead with specific places. Considerable evidence is available for their organisation of activities in the landscape (e.g. papers in Gamble and Roebroeks 1999a and Conard 2001, 2004). Although the specific reasons for repeated use of certain locales often eludes us (Roebroeks and Tuffreau 1999) enough data exist to allow some broad generalisations of why and how Neanderthals gave importance to certain points in the landscape. These include

- the demonstrable importance of certain geographical areas to Neanderthal activities (e.g. Moravian Gate, north Aquitaine basin and Pyrenean foothills: Svoboda 1999; Turq 1999) either purely constrained by resource availability (in which case one might refer to them as 'local operational areas' – White and Pettitt 2011, 77-82) or given social significance (in which case one might refer to them as 'territories' which may be recognised and distinguished by differing technotypological traditions and raw material transfers - Gamble 1999, 239-44)
- the repeated use of certain locales probably due to their proximity to water and rich diversity of exploitable resources as evidenced by many sites in most regions (papers in Gamble and Roebroeks 1999a and Conard 2001, 2004; Bicho 2004; Walker et al. 2004)
- the repeated use of particular caves and rockshelters for shelter (ibid.), and on occasion the physical modification of such sites to suit the demands of shelter (e.g. Kolen 1999; Turq 1999, 111; Cabrera et al. 2004; Vaquero et al. 2001, 2004; Foltyn et al. 2004)
- the spatial organisation of activities on campsites whether or not such physical modification is evident (e.g. Bonjean and Otte 2004)

- the repeated association of points in the landscape (often of tactical significance) where prey are predictable seasonally and to which Neanderthals repeatedly returned for resources as diverse as bovid meat, fat and bone in Quercy (Jaubert 1999) or bear fur in the Jura (Tillet 2001).

While these of course do not indicate that Neanderthals exercised similar organisational principles with respect to their dead, they do suggest that we should not be surprised if they associated certain locales with the dead; if such locales were repeatedly associated with the dead; if a degree of physical modification of some locales was associated with mortuary activities, and perhaps if such associations varied regionally. Further observations may be of more specific relevance to the mortuary sphere. As hunter-gatherers Neanderthals would be familiar with death and decay; body parts of their prey would have surrounded them and fragmentation – whether of lithics or of carcasses for the purposes of sharing and consumption, the two of which may have been conceptually linked (Pettitt 2007), provide the context for funerary elaboration of fragmentation of the body. Cutmarks are known on a number of Neanderthal remains and indicate that on occasion they were fragmenting their dead, and while this may on occasion reflect nutritional cannibalism, in some cases it reflects more enigmatic reasons for defleshing (Pettitt 2011a, 93-7) and examples that are difficult to reconcile with any ‘prosaic’ activities. Frayer et al. (2006), for example, have studied the cutmarks on the Krapina 3 cranium, concluding that they do not represent cannibalism, nor defleshing, but the repeated cutting/scoring of the deceased forehead perhaps as a form of marking and possibly “representing some type of symbolic, perimortem manipulation of the deceased”.

It is probably fair to conclude, therefore, that on occasion, some Neanderthal groups were processing some of their dead for mortuary reasons, protracting their interaction with the individual body beyond its physical death. In the taskscape, it is the body that provides the conceptual link between the individual and the place. In terms of other animals it is sensible to suppose that death provided both reasons for *attraction to* and *avoidance of* certain locales. It is clear that Neanderthals were able to recognise (and perhaps deliberately avoid) dangerous places where their own death was a possibility (e.g. places such as caves where carnivores were active: Mussi 1999 Gamble 1986, 309; 1999, 231). By contrast they could clearly recognise and deliberately frequent places where the *corpses* of suitable prey animals were known to accumulate (e.g. large pachyderms at Lynford, UK; Pagnano d’Asolo, Italy; Lehringen, Germany: Schreve 2006; Mussi 1999). Thus the landscape is in this sense imbued with the possibility and expression of death, and if we agree that Neanderthals were able on occasion to deliberately inter some of their dead surely their ‘paths of view’ (Gamble and Roebroeks 1999b, 9-10) must have extended into the funerary realm.

Despite a strong critique (Gargett 1989, 1999) most specialists agree that there are a number of convincing examples of simple inhumation among the Neanderthals. While the number of examples is low, and while some which have often been taken as strong examples prove on modern scrutiny to be less clear (e.g. Roc de Marsal; Sandgathe et al. 2011) one can probably assume that some Neanderthal groups buried some of their dead some of the time (Pettitt 2001; 2011a, 78-138). For the European Middle Palaeolithic these are all single inhumations, which indicate the deliberate modification of a locale in order to receive the dead; a three-stage process involving a) the excavation of a pit for the deliberate purpose of burial, b) the placement of a body within it, and c) the covering of the body with the sediment excavated. In most cases isolated inhumations of course do not necessarily indicate a specific association of that place with the dead, and as most Neanderthal burials appear to have been emplaced in sites which were otherwise used as camps perhaps one is not justified in making any such inferences from them. One must, however, consider the possible implications of the Regourdou 'tomb', in which an adult Neanderthal was apparently interred in a grave defined by dry stone walling and covered by a large stone slab, next to a cairn covering the skeleton of a bear (discussed in Pettitt 2011a, 112-14). If this is correct – and there is no reason to assume that it is not – it reflects an obvious modification (and thus association) of the place with a dead Neanderthal and with a dead bear, and probably an association between the two. Similarly, if artefacts found in one or two graves are correctly interpreted as deliberately placed 'grave goods' while they may indicate some kind of association with the dead (or the individual who deposited them) they need not indicate a specifically symbolic association between these items and the dead. Both of these categories of data are therefore heuristically limited. By contrast, locales where multiple burials were emplaced on separate occasions which appear to relate to each other spatially, may imply that a deliberate association of these places with the dead. Elsewhere I have referred to these as *places of multiple burial* to distinguish them formally from the larger, later, and spatially discrete 'cemeteries' (2011a). It may well be that places where the fragmentary remains of a number of Neanderthals (e.g. ~20 at L'Hortus, ~22 at La Quina, ~25 at Krapina) represent a deliberate association of these places with the dead, although this is of course unclear. Where multiple burials occur, however, such an association seems more secure, and these seem to have appeared by ~75 ka BP (Table 1). At Shanidar four individuals (Shanidar IV, VI, VII and VIII) at least seem to have been interred very close in time and in very close spatial association in a particular part of the cave, each 'respecting' the position of the others, and other individuals may have been covered with small rock cairns that were distinguishable from rock falls. At La Ferrassie seven individuals - including infants – seem to have been buried in four groups; two of these groups (Burials I and 2 and 5 and 8 were interred close to the shelter's wall, burial 1 with a stone slab under

its head and two flanking it and 5 and 8 in apparent association with several sediment mounds; a third (burials 3, 4/4b) in parallel grave cuttings more centrally and the fourth isolated burial 6 within one of several bowl-shaped pits apparently associated with a limestone block bearing cupules. At both these sites, therefore, one can observe the repeated interment of a number of individuals in deliberately excavated graves, a spatial similarity of the position of these graves, the apparent spatial association of 'groups' of interments, and the apparent physical modification of the area in close proximity to the burials; and at La Ferrassie stone blocks may in some way have delineated or marked the interments. It is difficult to escape the conclusion that these represent the association of these places with the dead; of the dead with each other; and the persistence of these associations over time. To the groups of La Ferrassie and Shanidar, therefore, the dead had not quite departed.

Conclusion: the evolution of landscapes of the dead

I argue that at least in some Neanderthal groups the dead continued to linger in the imagination, fixed at certain points in the landscape and brought to mind when the groups returned to these locales. This need not imply specifically *symbolic* behaviour, although one cannot rule this out, but at the very least such imaginary constructs must form an important stage on the road to fully symbolic minds. In the wider sense the belief in the persistence of the dead and their association with specific places does not necessarily imply religious beliefs; as Barrett (2011) has noted these probably arose later with the development of a 'metarepresentational ToM' in which humans were capable of thinking about thoughts. It is to my mind no coincidence that funerary caches and graves appear at this time, i.e. from ~100 ka BP. They are containers, and containers (rather than instruments) become more apparent in the archaeological record after 100 ka BP (Gamble 2007, 2010). Prior to that time it is possible that mortuary activity required only instruments (hands, the senses, tools for defleshing). Thus the translocation of mortuary activities from the body to place becomes one from instruments to containers in Gamble's terms. Overall, I suggest the following phases in the development of archaic hominin mortuary activities and the related emergence of the association of the dead with places, which I hope are testable and thus ultimately falsifiable.

- A *Core mortuary phase* (Miocene hominoids and Pliocene hominins onwards) defined by variable expression of infanticide, cannibalism and partial consumption of corpses; socially mediated investigation of the corpse ('morbidity'); 'mourning' activity including signs of

depression, calls and carrying of corpses as an act of detachment; Funerary gatherings comprising social theatre around the corpse and use of corpses socially, e.g. as adjuncts to display. More generally one might predict that in this phase elements of superstitious thought created in the minds of particularly inventive children became exapted for use in pre-existing social rituals, some of which related to morbidity and social theatre occasioned by the dead. The conceptual dualism created by the animacy/theory of mind contradiction causes the belief in the persistence of the dead to emerge very early on.

- *An Archaic mortuary phase:* (australopithecine grade hominins and early *Homo* to the origins of *Homo sapiens*) defined by a continuation of the consumption of corpse parts, morbidity, and mourning; the developing complexity of social theatre around the corpse as group size and neurological capacities increased; the simple incorporation of places in the landscape into mortuary activity, i.e. through deliberate deposition of corpses into natural features ('funerary caching'). More generally one might predict that as the size and social complexity of hominin groups grew, so did the duration and complexity of mortuary activities. These activities begin to be underpinned by simple, socially-mediated belief systems predicated on a Theory of Mind.
- *A Modernising mortuary phase* (Middle Palaeolithic/Middle Stone Age *Homo neanderthalensis* and *Homo sapiens* and possibly European Early Upper Palaeolithic) defined by the continuation of consumption of corpse parts, morbidity, mourning, funerary caching and developing social theatre around the corpse; a clear association of places in the landscape with the dead; the development of formal burial out of funerary caching (and often an association of the two); the development of places of multiple burial; some use of material culture as adjuncts to burials, e.g. rare examples of grave goods, stone markers/covers, and ochre. More generally, one might predict that as the complexity of such

face-to-face mortuary activities grew, hominin groups would come under selection to associate places with the dead, to alleviate the critical threshold where it became impractical to spend more time and effort on such activities. Thus as hominin cognition developed and individuals became able to conceive and communicate more complex models of society and the resource landscape, specific places became associated with the dead.

- *A Modern mortuary phase* (European Mid Upper Palaeolithic, possibly from Early Upper Palaeolithic) defined by the continuation of consumption of corpse parts, morbidity, mourning, funerary caching and elaboration of social theatre around the corpse; a clear association of places in the landscape with the dead and places of multiple burial; the clear use of material culture as adjuncts to burial; the elaboration of circulation and use of human remains ('relics') and thus commemoration; the elaboration of types of burial (single, double, multiple); the association of new phenomena with burials, e.g. fire, symbolism (art); elaborate rules for burial as *containment*; the recognition of the status/agency of the dead in mortuary ritual; the first signs of continent-scale general practises; with funerary activity now recognisably formed of regional variations on more widespread themes.
- *An Advanced mortuary phase* (Late Upper Palaeolithic/Epipalaeolithic onwards) defined by the persistence of elements of the modern mortuary phase, their spread to new areas of the world (e.g. New World) and increasing regional and cultural variability; the origin of formal cemeteries, i.e. recognition of exclusive areas of the dead and the collective representation of death.

I have therefore identified associative interaction with the dead and the landscape with the modernising mortuary phase of the Late Middle and Upper Pleistocene, and specifically with

Neanderthals and early, non-European *Homo sapiens*. It is in this phase that one can identify for the first time landscapes of the dead. If I am correct in this identification, then it provides important archaeological verification of the Pre-Human religion hypothesis, i.e. that religious thought *sensu lato* emerged prior to, or at least not exclusive to, *Homo sapiens*.

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Chronology	Body	Place	Body/Place	References
~800-850 ka BP	Gran Dolina, Atapuerca (Spain), TD6 Aurora stratum, <i>Homo antecessor</i> : removal of soft tissue on cranial and postcranial remains of several individuals			Bermúdez de Castro et al. 1997. 2008. Parés and Pérez-González 1999. Falguères et al. 1999. -Jalvo et al. 1999.
~400-500 ka BP		Sima de los Huesos, Atapuerca (Spain), <i>Homo heidelbergensis</i> : possibly deliberate deposition of at last 28 individuals near shaft. (Cutmarks on teeth appear to pertain to paramasticatory use of the dentition, not to defleshing)		Arsuaga et al. 1997a, b. Bermúdez de Castro et al. 2004. Lozano-Ruiz et al. 2004. Bischoff et al. 2003.
~300-340 ka BP	Castel di Guido, near Rome (Italy), archaic hominin with <i>H. erectus</i> and <i>H. neanderthalensis</i> features: defleshing of the cranium			Mariani-Costantini et al. 2001
~120-140 ka BP	Krapina (Croatia), <i>Homo neanderthalensis</i> : defleshing of several individuals including scalping and/or scoring of forehead of Krapina 3			Russell 1987. Rink et al 1995. Frayer et al. 2006. Orscheidt 2008.
~100-120 ka BP	Moula Guercy Cave level XV (France), <i>Homo neanderthalensis</i> : defleshing and disarticulation of six individuals			Defleur et al. 1999
Probably ~60-75			La Ferrassie (France),	Capitan and

ka BP			<i>Homo neanderthalensis</i> : deposition of seven individuals in excavated graves/pits, and defleshing of cranium of La Ferrassie 6. Possible use of stone slabs as markers.	Peyrony 1912a, b. 1921. Peyrony 1934. Delporte 1976. Heim 1976. Maureille and van Peer 1998.
~60-70 ka BP on chronocultural grounds (MIS4)?	Combe Grenal (France), <i>Homo neanderthalensis</i> : defleshing			Le Mort 1989
~60-70 ka BP on chronocultural grounds (MIS4)?	Marillac (France), <i>Homo neanderthalensis</i> : defleshing			Le Mort 1988
~40-50 ka BP		Shkaft Mazin Shanidar (Iraq), <i>Homo neanderthalensis</i> : burial of at least four individuals (possibly more), these four in apparent spatial association		Solecki 1963, 1972. Trinkaus 1983. Cowgill et al. 2007.
~40-43 ka BP		Sima de las Palomas (Spain), <i>Homo neanderthalensis</i> : Deliberate introduction of at least three individuals into cave		Walker et al. 2008, in press
~41-42 ka BP		Feldhofer Grotte, Neanderthal		
~37-41 ka BP			El Sidrón (Spain), <i>Homo neanderthalensis</i> : deposition outside the cave and defleshing and disarticulation of at least eight individuals	Rosas et al. 2006

Table 1. Evidence and possible evidence of mortuary activity among European pre-modern hominins, presented by body or place focus and arranged chronologically. Ages given are in calendrical years unless stated. For inhumation only sites with multiple burials are included, as with single inhumations one cannot rule out a fortuitous connection with specific places. The Neanderthal remains from Engis are omitted from the list of modified remains, marks on which appear to relate to the post-excavation restoration of the cranial vault rather than modification in antiquity (White and Toth 1989), as is the juvenile mandible from Les Rois which bears some Neanderthal characteristics but which may belong to *Homo sapiens* (Ramirez-Rozzi et al. 2009).

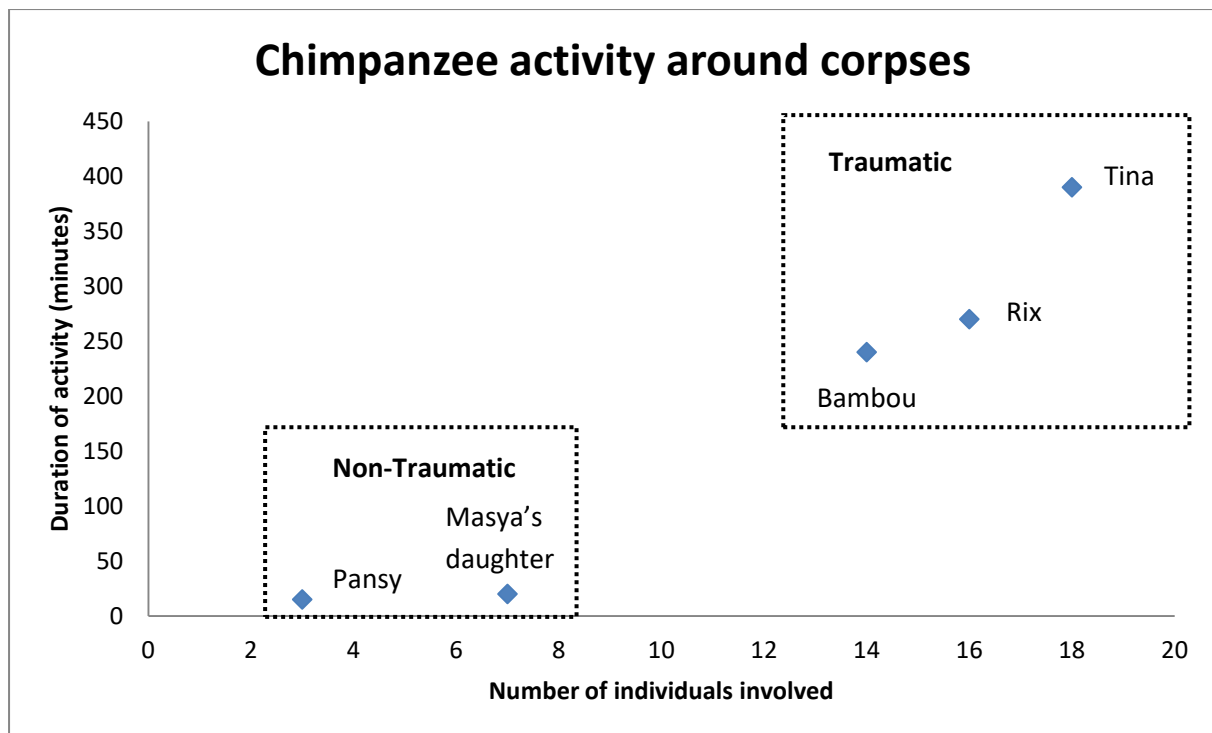


Figure 1. Duration and number of individuals observed in interaction with the dead among chimpanzees. Data: Rix, Gombe, Tanzania (Teleki 1973); Bambou and Tina, Taï, Ivory Coast (Boesch and Boesch-Achermann 2000); Pansy, Blair Drummond Safari Park, Scotland (Anderson et al. 2010); Masya's daughter, Chimfunshi Wildlife Orphanage, Zambia (Cronin et al. 2011: the infant was observed to be unhealthy from very early in life, thus the observers were not confident that she would survive and did not name her; K. Cronin pers. comm.).